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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/464,315	12/16/1999	TAN DU	TI-29436	7360
23494	7590	01/26/2005	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			CRAIG, DWIN M	
			ART UNIT	PAPER NUMBER
			2123	

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/464,315

Applicant(s)

DU ET AL.

Examiner

Dwin M Craig

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 9-22-2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 6, 11 and 17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 7, 12, 13, 18, 19, 23 and 24 is/are rejected.
- 7) ☒ Claim(s) 3-5, 8-10, 14-16, 19, 21, 22 and 25-27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 5-6-2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. Claims 1-27 have been presented for reconsideration in view of Applicants arguments and amended specification. Claims 6, 11 and 17 have been cancelled.

#### Response to Arguments

2. Applicant arguments submitted in the 9-22-2004 responses have been fully considered. The Examiners response is as follows.

2.1 Regarding the Applicant's response to the Examiner's objection to the drawings and the 35 U.S.C. 112 written description rejections of the claims.

The Applicant argued,

Additionally, Claims 1-5, 7-10, 12-26, and 18-27 were rejected under 35 U.S.C. 112, first paragraph, as failing to comply with an enablement requirement. Again, the Examiner refers to item 39 on page 2 of the specification. However, since this again refers to the background of the invention the relationship to the claimed invention is questioned. Applicants respectfully submit that the enablement for the claimed invention can be found under the Detailed Description of the Preferred Embodiment. It is respectfully submitted that Claims 1-5, 7-10, 12-16, and 18-27 are in full compliance with 35 U.S.C. 112 and satisfies both the written description requirement and the enablement requirement.

The Examiner asserts that the Applicant's amendment to the specification has resolved the 35 U.S.C. 112 enablement and written description problems noted in the last office action. However, it is noted that Figure 2 has a reference to item 62, *which is also labeled Vp*, and that Figure 3 has a resistor labeled item 62, the Examiner respectfully submits that the drawings still require correction.

2.2 As regards Applicants response to the 35 U.S.C. 102(a) rejections of Claims 1-5, 7-10, 12-16, 18-27.

Applicant argued,

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However, Pedrazzini discloses nothing with respect to generating a magnetic field to oppose eddy currents established in structures adjacent to the coil as recited above claimed subject matter. In light of the above, it is respectfully submitted that the present application is in condition for allowance, and notice to that effect is respectfully requested.

The Examiner respectfully traverses Applicants argument. The Examiner notes that modern disk drive systems that use Voice Coil Motors require that generating magnetic fields to oppose eddy currents is inherent to the design as disclosed in the *Pedrazzini* reference. See *Atlas Powder Co. v. IRECO, Inc.*, 190 F.3d 1342, 51 USPQ2d 1943 (Fed. Cir. 1999).

2.3 In view of Applicant's arguments the Examiner has changed the scope of the previous prior art rejection.

### Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "62" has been used to designate both "*Node Vp in Figure 2*" and "*Resistor Ro in Figure 3*". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

**Claim Rejections - 35 USC § 102**

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. **Claims 1, 2, 7, 12, 13, 18, 19, 23 and 24** are rejected under 35 U.S.C. 102(a) as being clearly anticipated by **Pedrazzini U.S. Patent 6,373,650**.

4.1 As regards independent **Claims 1, 7, 12, 18 and 23** the *Pedrazzini* reference teaches a method of determining velocity (**Col. 4 Lines 25-45, Col. 5 Lines 5-16**), a circuit to terminate the driving coil (**Figure 3 Item 32**), a circuit to apply the current to the same coil (**all of Figure 3**), and a circuit for measuring BEMF and velocity (**Figure 3 and Col. 2 Lines 30-45, Col. 5 Lines 5-16**).

4.2 As regards dependent **Claims 2, 13, 20 and 24** please see **Figure 3** (*note the feedback paths that provide for a reverse in current direction through the coil, Item 11*).

**Allowable Subject Matter**

5. Dependent **Claims 3-5, 8-10, 14-16, 19, 21, 22 and 25-27** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Examiner's Reasons for Allowance:

The prior art does not teach or make obvious the following limitations in combination with other limitations, (*Dependent Claim 25 for Example*), "*Activating selected VCM coil driver transistors for a time directly related to a magnitude of the original current command voltage when said driving current is terminated.*" As enabled by the Item marked 23 in Figure 2 and all of Figure 4, the Applicant's Claimed limitation of activating transistors based on a measured

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magnitude of a previously applied command voltage, is neither anticipated nor made obvious by the prior art.

**Conclusion**

**6. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

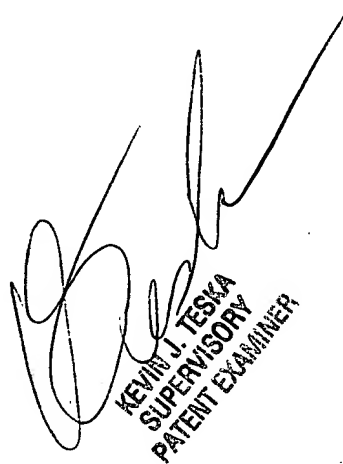
**6.1** Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwain M Craig whose telephone number is (571) 272-3710. The examiner can normally be reached on 10:00 - 6:00 M-F. The Examiner's E-Mail address is: [craig.dwin@uspto.gov](mailto:craig.dwin@uspto.gov)

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Teska can be reached on (571)272-3716. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DMC



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